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ABSTRACT

Research indicates that prior knowledge is an exceptionally important determiner of reading comprehension. Many of the prereading strategies currently used to assist reading comprehension do not help teachers identify what students already know about a topic. In an effort to integrate instructional assessment with prereading instruction, the Pre-Reading Plan (PReP) was designed. PReP is a three-step procedure for teachers to use before assigning textbook readings. In the first phase, a key word or concept is given, and students tell what ideas freely come to mind. In the second phase, students are asked what made them think of their first responses. They listen to each other's explanations and interact. Phase three allows students to verbalize associations that have been elaborated or changed through the previous discussion. During phases one and three, three levels of prior knowledge are visible: much, some, and little prior knowledge. Based on responses during phase three, the teacher will be able to judge whether the students' concepts are sufficiently close to those presented in the text to permit comprehension and learning of the material. (HTH)

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FROM THEORY TO PRACTICE: A PRE-READING PLAN

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FROM THEORY TO PRACTICE: A PRE-READING PLAN

Recent research into the reading process has reinforced the idea that a reader's prior knowledge is an exceptionally important determiner of comprehension (Rumelhart and Ortony, 1977; Brown, 1977; Anderson, Pichert and Shirey, 1979). While this is certainly not a novel concept, the research has provided new insights into the relationship between prior knowledge and reading comprehension.

Both reading specialists and content area teachers at the secondary level are acutely aware that for adequate comprehension to occur, there must be a match between what the reader already knows and the content and vocabulary in a text. Unfortunately, only general guidelines and a few instructional strategies have been available for helping students become aware of what they know about a topic and of how to relate that knowledge to the information in a text. Many teachers have experimented with a variety of ways to bridge the gap between what their students know and the material to be read. They have introduced difficult vocabulary prior to the reading assignment, prepared study guides, developed concept maps, and even resorted to presenting much of the text content orally in class discussion. Still, they report that these activities often are not as successful as they would like, particularly with the poorest achievers. One problem with many of the strategies currently used is that they do not help teachers identify what students already know about a topic. The result is that teachers have to base instructional decisions on assumptions

about students' knowledge. This sometimes leads to ineffective teacher intervention without the teacher really knowing what went wrong.

In an effort to integrate instructional assessment with pre-reading instruction, a Pre-Reading Plan (PReP) was designed to provide an easy-to-use format that includes both an assessment component and an instructional component. Aspects of this plan will be familiar to many teachers and may bring to mind teaching strategies suggested by Earle (1976) and Herber (1978). However, what PReP provides that is new and helpful is an organization of activities within a structured framework based on recently expended understandings of how knowledge is structured in memory, how it is retrieved, and how it is used to facilitate comprehension.

While PReP is a very straightforward teaching strategy, an understanding of why it works is essential to implementing it successfully. Thus, before describing the PReP itself, some background information about memory and comprehension processes will be presented.

BACKGROUND

The real issue in helping readers use prior knowledge to improve their comprehension relates to how information is stored in memory, and retrieved when needed. Elaborate discussions of this topic are available in Adams and Collins (1979), J. Anderson (1976), Anderson, Spiro and Montague (1977), and Spiro (1980). Their work suggests that readers file information in memory based on common categories or attributes in much the same way that information is

organized in a library. A highly sophisticated "cross-referenced" network of associations permits a reader to retrieve specific information according to the organization and structure of that knowledge. While an essential feature of information storage is the internal network of relationships, retrieval is based on both internal and external relationships. That is, when an idea is presented externally in a text, the reader has an opportunity to link that idea to others stored internally, in memory. Occasionally, a reader may have no stored knowledge which can be related to the concepts in the text. However, this is rare. More often the reader is not aware of what he or she knows about the topic and does not know how to identify the bit of information within his or her own memory structure which might permit access to a whole network of relevant associations. Still other times the reader can make a weak link between a text concept and his or her prior knowledge, but cannot develop it enough to realize which information is more or less relevant to the given topic. On the other hand, when a reader has a good deal of prior knowledge about a concept in a text, that knowledge can be systematically reviewed to determine which aspects are most relevant in comprehending the reading passage at hand.

When preparing students for a reading activity, we can help them become aware of relevant prior knowledge, while at the same time we are judging whether or not that knowledge is sufficient for comprehension of the text. At that point we will be able to make knowledgeable decisions about reading assignments and

instruction about related concepts.

THE PRE-READING PLAN

The PReP is a 3-step assessment/instructional procedure for teachers to use before assigning textbook reading to their classes. It is a group discussion activity (approximately 10 students) which helps both teachers and students gain information about students' text-related prior knowledge. The assessment aspect of the activity helps the teacher 1) to determine the amount of prior information a reader has about a specific topic, as well as how the reader has organized this information; 2) to become more aware of the language a student uses to express knowledge about a given subject; and 3) to make judgments about how much additional background information and vocabulary is needed before students can successfully comprehend the text.

In preparation for the discussion, the teacher using PReP examines the text and selects a key word, phrase, or picture to stimulate group discussion. For example, if the text deals with the democratic form of government, "congress," "checks and balances," or "bicameral" might be selected. A detailed picture of a courtroom scene might be used for a text about the judicial system. The teacher tells the students the topic they will be reading about and then begins the PReP. (The theoretical framework for PReP is presented in greater detail in Langer, in press.)

The PReP involves three phases:

I. Initial Associations With the Concept

In this first phase the teacher says, "Tell anything that comes to mind when..." (e.g., "...you hear the word "congress"). As each student tells what ideas initially came to mind, the teacher jots each response on the board.

It is during this phase that the students have their first opportunity to find associations between the key concept and their prior knowledge.

When this activity was carried out in a junior high school class, one student, Bill, said, "important people." Another student, Danette, said "Washington D.C."

II Reflections on Initial Associations

During the second phase of the PReP the students are asked, "What made you think of ... (the response given by a student)." This phase helps the students develop awareness of their network of associations. They also have the opportunity to listen to each other's explanations, to interact and become aware of their changing ideas. Through this procedure they have an opportunity to weigh, reject, accept, revise and integrate some of the ideas that came to mind.

When Bill was asked what made him think of important people, he said "I saw them in the newspaper" and when Danette was asked what made her think of Washington D.C. she said, "Congress takes place there".

III Reformulation of Knowledge

In this phase the teacher says, "Based on our discussion and before we read the text, have you any new ideas about..." (e.g. "congress").

This phase allows students to verbalize associations that have been elaborated or changed through the discussion. Because they have had a chance to probe their memories to elaborate their prior knowledge, the responses elicited during the third phase are often more refined than the responses elicited during phase one.

This time Bill said, "Lawmakers of America" and Danette said "U.S. government part that makes the laws."

LEVELS OF RESPONSE

The nature and organization of students' prior knowledge leads to three distinguishable levels of response during the PReP. These levels have been shown to be highly related to students' ability to recall the text after reading. In fact, prior knowledge specifically related to a passage is so important that a series of studies have indicated such knowledge to be more important than IQ in determining how much a student will be able to recall from the passage (Langer, 1980; Langer and Nicolich, 1980).

LEVELS OF PRIOR KNOWLEDGE

Much	Some	Little
Superordinate concepts	Examples	Associations
Definitions	Defining Characteristics	Morphemes
Analogies	Attributes	Sound alikes
Linking		First hand experiences
		No apparent prior knowledge

If the student has much prior knowledge about the concept being discussed, responses during PReP usually take the form of superordinate concepts, definitions, analogies, or linking of that concept with another concept. (E.g. "Congress is like Parliament in that both...," "Court--The scale that weighs your destiny," or "Dictator--A ruler with absolute authority over the government.")

If the student has some prior knowledge about the concept being discussed, responses generally take the form of examples, attributes, or defining characteristics. (E.g., "Government-- makes laws," "Court--Trust in the judgment of others," or "Government-- dictatorship."

If the student has little prior information about the concept, responses generally focus on such low level associations as morphemes (prefixes, suffixes, and root words), words which sound like the

stimulus word, or first hand (and not quite relevant) experiences, (E.g., "Congress--important people," Binary--bicycle," Gerrymander--salamander," or "Iran--news on television,")

If we look at Bill's responses, we can see that "important people" was a low level association response and showed little prior knowledge, yet his "lawmakers of America" response in phase three represented a defining characteristic and therefore showed some prior knowledge. Danette's "Washington D.C." response was an attribute of congress and therefore fell in the some prior knowledge category while her response to phase three, "U.S. government part that makes laws," was a definition and thus showed much prior knowledge.

As a further example of how PReP works, consider the following selected response of a group of high school juniors to the word "featherbedding":

	Phase I	Phase II
Roseanne	pillow	a pillow is fluffy like a featherbed
Marshall	bed of feathers	you stuff the feathers in the bed 'till they can't fit any more, then you have a featherbed

	Phase I	Phase II
Felipe	unions	something about unions and strikes - I learned it in grade school but can't remember anymore

Beginning these students' explanations, and a bit of directed teacher questioning, the students were able to visualize feathers being stuffed into the "bed" and to relate that to too many workers doing the same job. By phase III of PReP, Roseanne said, "stuffing people away." Marshall said, "having too many people do the work," and Felipe said, "stretching the employment rolls by having more people than necessary do the same job." Here we can see that Roseanne's response is at the little level because she is still using her potentially useful but still tangetial association of feather stuffing. Marshall's response is at the some level because "too many people doing the work" is certainly an attribute of featherbedding. Because Felipe's response is a good definition of featherbedding, this can be categorized at the much prior knowledge level. Although the teacher led the students to "see" the connections which could be helpful in relating to the concept, the content and language were the student's own; and when the teacher intervened, it was to help the students elaborate and revise their own concepts.

Once the teacher becomes familiar with the prior knowledge classifications, judgments about the levels of response during phase

one and three can generally be made quite easily. (Phase II discussions, directed by the teacher, are not relevant here.) This information will help the teacher to judge whether the language and concepts verbalized by the students are sufficiently close to those presented in the text to permit successful comprehension of the material. Responses in the much and some categories generally indicate that the student can read the text with adequate comprehension. Students responding at the little level usually need direct instruction about relevant concepts. Suggestions for concept instruction can be found in Teaching Reading Comprehension (Pearson and Johnson, 1978).

SUMMARY

PReP is one way in which recent research can be translated into useful classroom application. The three steps in the PReP are based on research which amplifies our knowledge of comprehension and learning. This research suggests that we can help students comprehend a text by creating conditions under which appropriate knowledge is likely to be brought to awareness and applied. This permits a link between text concepts and past experiences and sets up, in the mind of the learner, appropriate expectations about the language and content of the text.

Every learner, simply because of life's experiences, has some knowledge that can be related to a new topic of study. Specific prior knowledge, how it is stored, and how it can be used in new

learning situations varies from person to person. Sometimes the association a student makes is idiosyncratically related to a concept. Phase II of the PReP will help in understanding such links, and may show us how to make the association useful for the student. If we wish to facilitate more efficient comprehension of text, providing experiences like PReP can help students to access, evaluate and utilize knowledge which is available to and meaningful for them.

REFERENCES

Adams, Marilyn J., and Alan Collins. "A Schema Theoretic View of Reading." New Directions in Discourse Processing, Vol. II. Roy O. Freedle, Ed., pp 1-21. Norwood, New Jersey: Ablex, 1979.

Anderson, John R. Language, Memory and Thought. Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1976.

Anderson, Richard C., Pichert, James W., and Larry L. Shirey. Effects of the Reader's Schema at Different Points in Time. Center for the Study of Reading Technical Report No. 119, April 1979. (ERIC Document Reproduction Service No. ED 169 523)

Anderson, Richard C., Spiro, Rand J., and William E. Montague, Eds. Schooling and the Acquisition of Knowledge. Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1977.

Brown, Ann. Knowing When, Where and How to Remember: A Problem of Metacognition. Center for the Study of Reading Technical Report No. 47. June 1977. (ERIC Document Reproduction Service No. ED 416 562)

Earle, Richard. Teaching Reading and Mathematics. Newark, Delaware: International Reading Association, 1976.

Herber, Harold L. Teaching Reading in the Content Areas. Englewood Cliffs, New Jersey: Prentice Hall, 1978.

Langer, Judith A. "Facilitating Text Processing: The Elaboration of Prior Knowledge, "Reader Meets Author/Bridging the Gap: A Psycholinguistic and Sociolinguistic Perspective. Judith A. Langer and Margaret Smith-Burke, Eds. Newark, Delaware: International Reading Association, in press. (ERIC Accession No. CS 205 577)

Langer, Judith A. "Relation Between Levels of Prior Knowledge and the Organization of Recall" 29th Yearbook of the National Reading Conference. Michael L. Kamil and Alden J. Moe, Eds., in press.

Langer, Judith A. and Mark Nicolich. Prior Knowledge and Its Effect in Comprehension. ERIC Accession No. CS 005 459, 1980.

Pearson, P. David and Dale Johnson. Teaching Reading Comprehension New York: Macmillan, 1978.

Rumelhart, David E. and Andrew Ortony. "The Representation of Knowledge in Memory." Schooling and the Acquisition of Knowledge. Richard C. Anderson, Rand J. Spiro and William E. Montague, Eds., pp. 99-135. Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1977.

Spiro, Rand J., Bruce, Bertram C. and William F. Brewer. Theoretical Issues in Reading Comprehension. Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1980.